

Application No.: 10/686,083
Amendment dated June 4, 2007
Response to Non-Final Action mailed March 12, 2007

Docket No.: 21058/1206459-US1

REMARKS

The undersigned thanks the Examiner for the courtesies extended during the interview of May 30, 2007. The Examiner provided several helpful suggestions to the undersigned to advance the prosecution of this application. The undersigned agrees with the Interview Summary of the interview.

The amendments are supported by the disclosure in paragraphs, [0022], [0025]-[0027], [0033], [0035], [0040], [0080]-[0084], Figure 1 and originally filed claims of the application.

Specification

The disclosure of paragraph [0023] on page 6 was objected to for containing embedded hyperlinks. Applicants have deleted these hyperlinks as suggested by the Examiner.

Claim rejections - 35 USC 103

Claims 1-2, 5-8, and 10-22 were rejected as being obvious over Williams in view of Baller, alternatively over Baller in view of Williams. These rejections are respectfully traversed.

The Examiner has acknowledged that Williams is totally silent about "cantilever structures [that] comprise one or more covalently attached partially double stranded nucleic acid templates, and wherein the cantilever structures have a sensitivity to respond to a mass dependent property change, deflection, or resonant frequency shift of the cantilever structures produced by changes in mass of the attached templates by addition of a single complementary mass labeled nucleotide" as recited in claim 1. Williams discloses cantilever structures of thin film bismuth-antimony thermopiles 2 in Figure 1. The thermopiles of Williams do not "have a sensitivity to respond to a mass dependent property change, deflection, or resonant frequency shift of the cantilever structures produced by changes in mass of the attached templates by addition of a *single* complementary mass labeled nucleotide."

Baller also fails to disclose that "the cantilever structures have a sensitivity to respond to a mass dependent property change, deflection, or resonant frequency shift of the cantilever structures produced by changes in mass of the attached templates by addition of a *single* complementary mass labeled nucleotide" as recited in claim 1. Thus, both Baller and Williams fail to teach or suggest the claimed invention *as a whole*. In fact, in the Interview Summary, the Examiner has stated that "[t]he cited does not detect a mass-labeled single nucleotide." Thus, the obviousness rejection over Baller and Williams should be withdrawn.

The Interview Summary states that "Amendments defining the STRUCTURE as including mass-labeled NTPs would define over the cited art. Hence, the structure must be more clearly defined so as to define over the prior art." To expedite the prosecution of this case, Applicants have amended claim 1 and other independent claims by positively stating that apparatus includes mass-labeled NTPs and by reciting several structural features of the claimed apparatus such as (a) the cantilever has a sensitivity to respond to a mass dependent property change, deflection, or resonant frequency shift of the cantilever structures produced by changes in mass of the coupled templates by addition of a single complementary mass labeled nucleotide, (b) the detection unit has a sensitivity to detect to a mass dependent property change, deflection, or resonant frequency shift of the cantilever structures produced by changes in mass of the attached templates by addition of a single complementary mass labeled nucleotide, and (c) a reagent reservoir configured to sequentially cycle a plurality of different types of mass labeled nucleotides through the analysis chamber. These structural features are not disclosed in the cited prior art.

Claims 1-2, 5-8, 10-22 were provisionally rejected for obviousness type double patenting over claims 15-17, 19-20, 29-30, 34-37 and 42-52 of copending Application No. 10/254,201 in view of Lindsay. As this rejection is a provisional rejection, Applicants are not required at act on it at this

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time but will take necessary steps if the claims in the pending application are otherwise deemed allowable.

Claims 1-2, 5-8, 10-22 were provisionally rejected for obviousness type double patenting over claims 24-46 of copending Application No. 10/705,389 in view of Fritz. As this rejection is a provisional rejection, Applicants are not required to act on it at this time but will take necessary steps if the claims in the pending application are otherwise deemed allowable.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

Dated: June 4, 2007

Respectfully submitted,

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